Disaster Management · GS - III

Cyclone preparedness in India has increasingly shifted from post-disaster relief towards anticipatory evacuation and risk reduction. Analyse the role of early warning systems, institutional coordination and community participation in reducing cyclone-related disasters.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 20/11/2026	GS - III	Disaster Management

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Cyclone Akvan, Indian Meteorological Department, National Disaster Management Authority, early warning systems, evacuation, Odisha model, Sendai Framework, coastal vulnerability, community resilience.

Model Answer

Introduction

Cyclones pose recurring threats to India's eastern coastline through high-speed winds, storm surges, flooding and heavy rainfall. Cyclone Akvan's landfall near Gopalpur on the Odisha-Andhra Pradesh coast on 20 November 2026 highlights the importance of preparedness and timely evacuation.

Role of Disaster Preparedness

1. **Early warning systems:** The India Meteorological Department (IMD) provides cyclone tracking, intensity forecasts and coastal alerts, enabling authorities to take preventive action.
2. **Anticipatory evacuation:** Timely relocation of vulnerable populations to cyclone shelters reduces casualties and exposure to storm surges.

3. **Institutional coordination:** NDMA, State Disaster Management Authorities, NDRF and local administrations coordinate rescue, relief and emergency response.
4. **Community participation:** Local volunteers, Panchayats and self-help groups improve awareness, evacuation and last-mile communication.
5. **Resilient infrastructure:** Cyclone shelters, embankments, resilient housing and early restoration of essential services reduce long-term losses.

Remaining Challenges

- Vulnerability of densely populated coastal settlements.
- Inadequate last-mile warning coverage.
- Displacement and livelihood losses among fishing and agricultural communities.
- Increasing risks from coastal erosion, sea-level rise and extreme rainfall.

Way Forward

India should strengthen multi-hazard early warning systems, expand cyclone-resilient infrastructure, integrate local disaster plans with land-use planning and promote nature-based solutions such as mangrove restoration.

Conclusion

Effective cyclone management requires a shift from reactive relief to anticipatory risk reduction. Scientific forecasting, coordinated institutions and empowered communities can substantially strengthen coastal resilience.